

Active Directory

June 1, 2010

What is Active Directory?

Active Directory is a Microsoft concept for a domain controller. This is a network where client computers connect to a server. This type of system is much more security intensive than a peer to peer network where people belong to workgroups to share data files. In a server controlled network, the administrators delegate access to files and devices. We can replicate the files in centralized storage and we can transfer them to other member machines for offsite storage in case of catastrophic damage to the server.

Active Directory

- Client – server network
- Kerberos security
- Administrator controlled
- Centralized storage
- Easy file transfers

Active Directory is a Database

Active Directory is a database. It can contain one computer, which would be the domain controller or many servers. We build the database to reflect the structure of the organization.

Active Directory Database

- Contains servers
- Holds computers and printers
- Controls companies
- Manages departments
- Establishes groups
- Defines users

Active Directory

When an organization is building its first server that machine will be the domain controller in the new forest. The domain will need a Fully Qualified Domain Name (FQDN) to operate. In many cases, the group does not have a FQDN, so they use “domain.local”.

Even in small businesses, we can still use Organizational Units, Groups, Objects and Users to maintain a secure hold on the company’s intellectual property and financial data.

Active Directory

- Forest
- Trees
- Domains
- Organizational Units
- Groups
- Users
- Objects

Designing an Active Directory

When designing an Active Directory, we want to study an organization. We ask questions like:

How is the management setup?

What departments do we have both internally and externally?

What are the rules for each department?

What groups do we have?

What are the rules for each group?

Who are the users and who do they report to?

Who are the network administrators?

Active Directory Design

- Requires knowledge
- Ability to research
- Learn about departments
- Create groups
- Install users
- Assign tasks

Active Directory Graphics

We can use symbols to show an Active Directory.

Rectangle - collection of trees in a forest

Multiple triangles – collection of domains in a tree

Triangle – domains

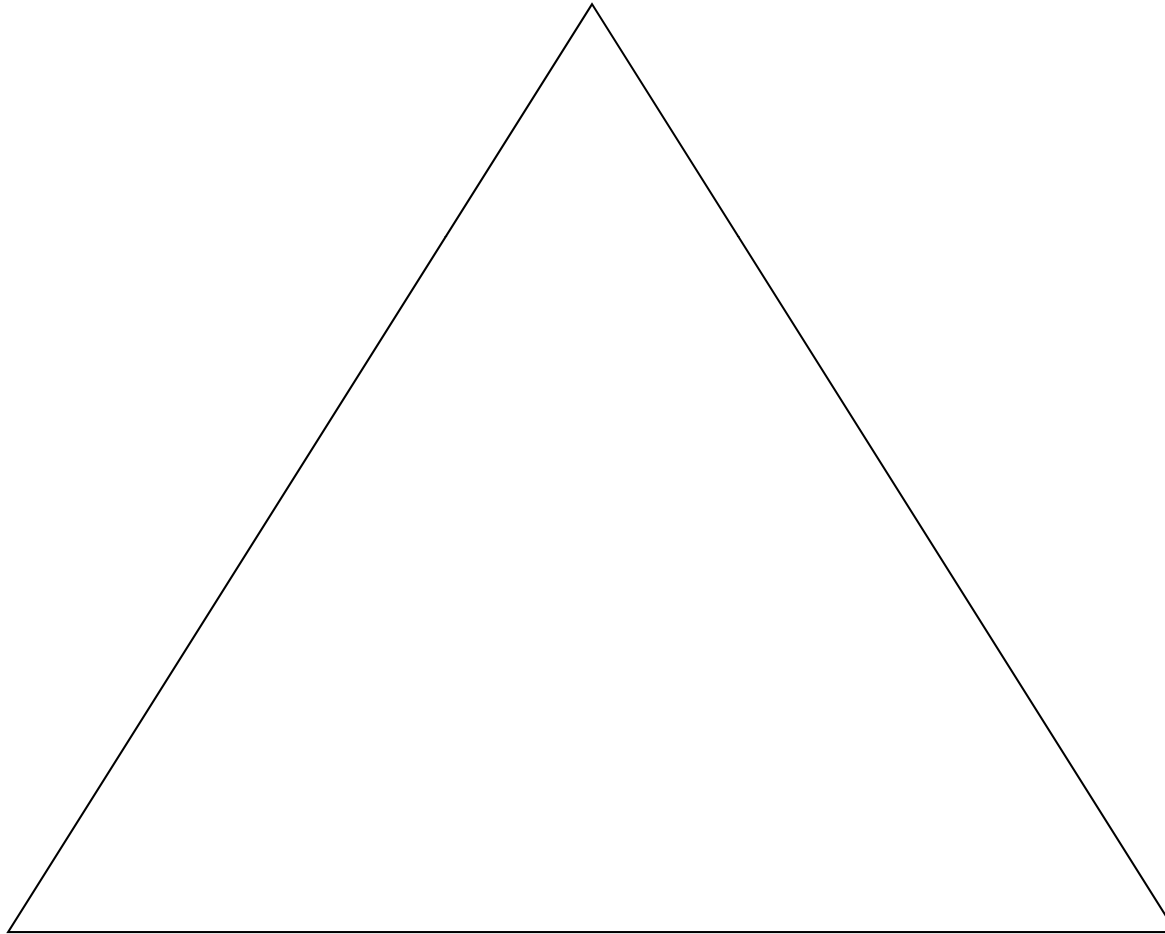
Lines – trust that connect the network

Circles – Organization unit

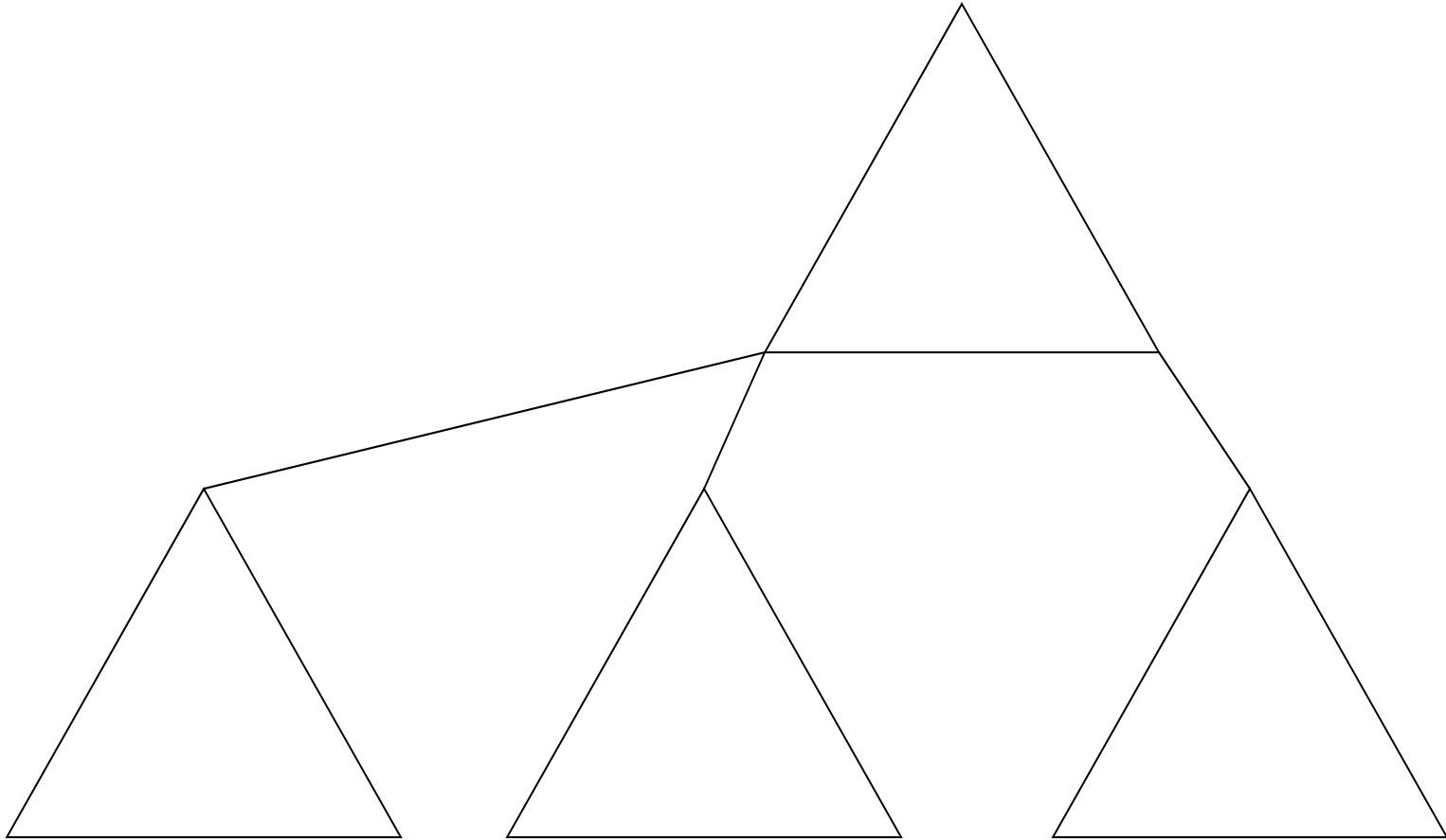
Cluster of people – group

In the next few slides, we can see examples of Active Directory graphics.

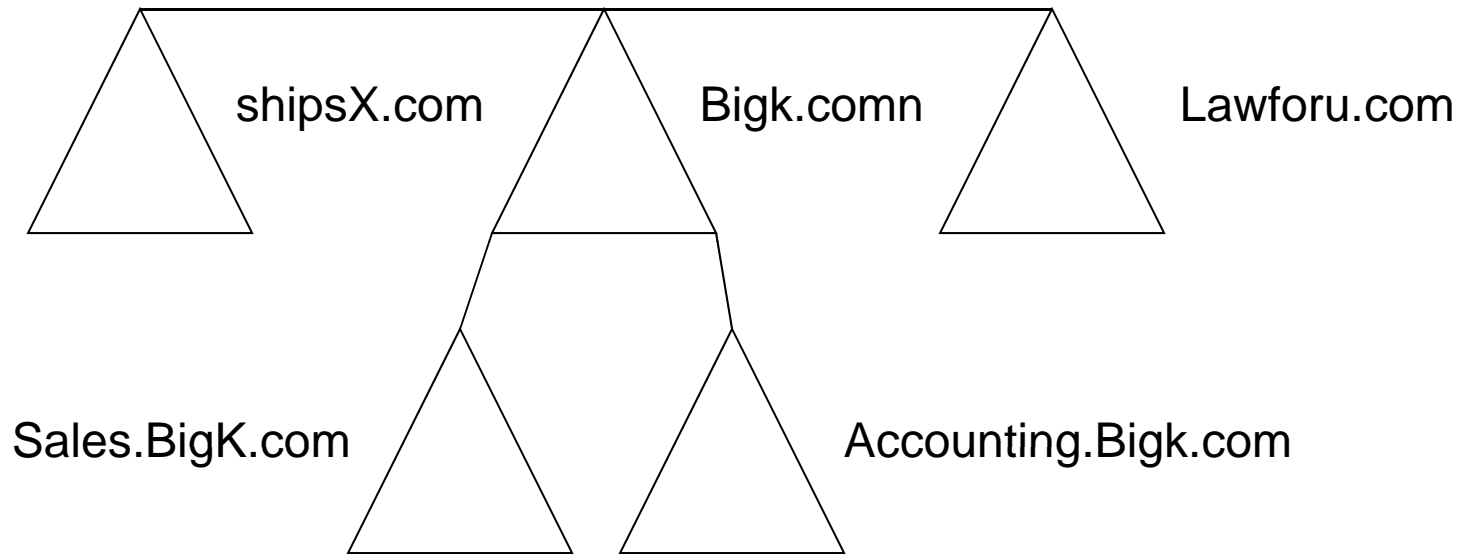
Domain



Tree



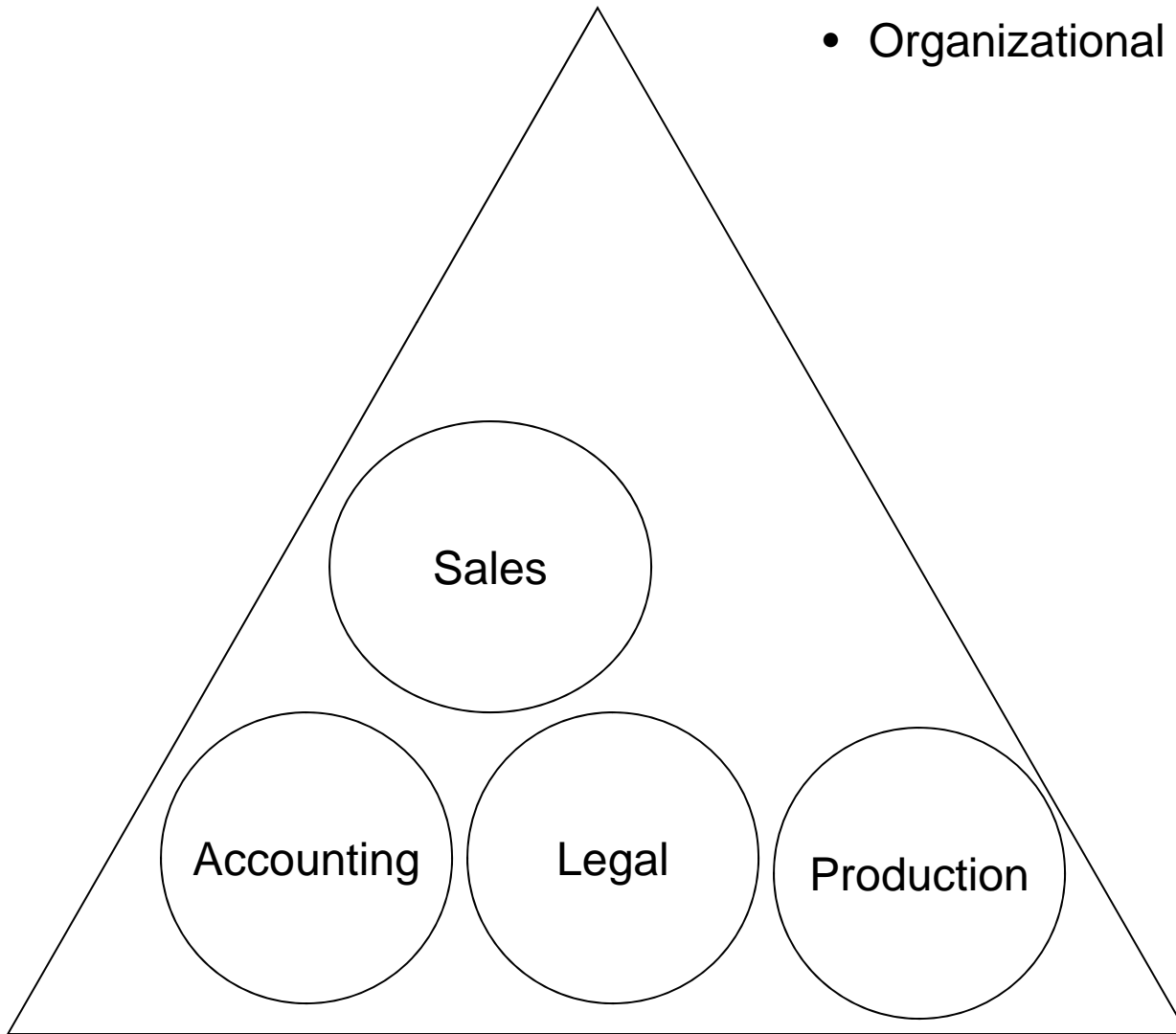
Forest



- Can have more than one tree
- Connected by a trust

Inside the Domain

- Organizational Units

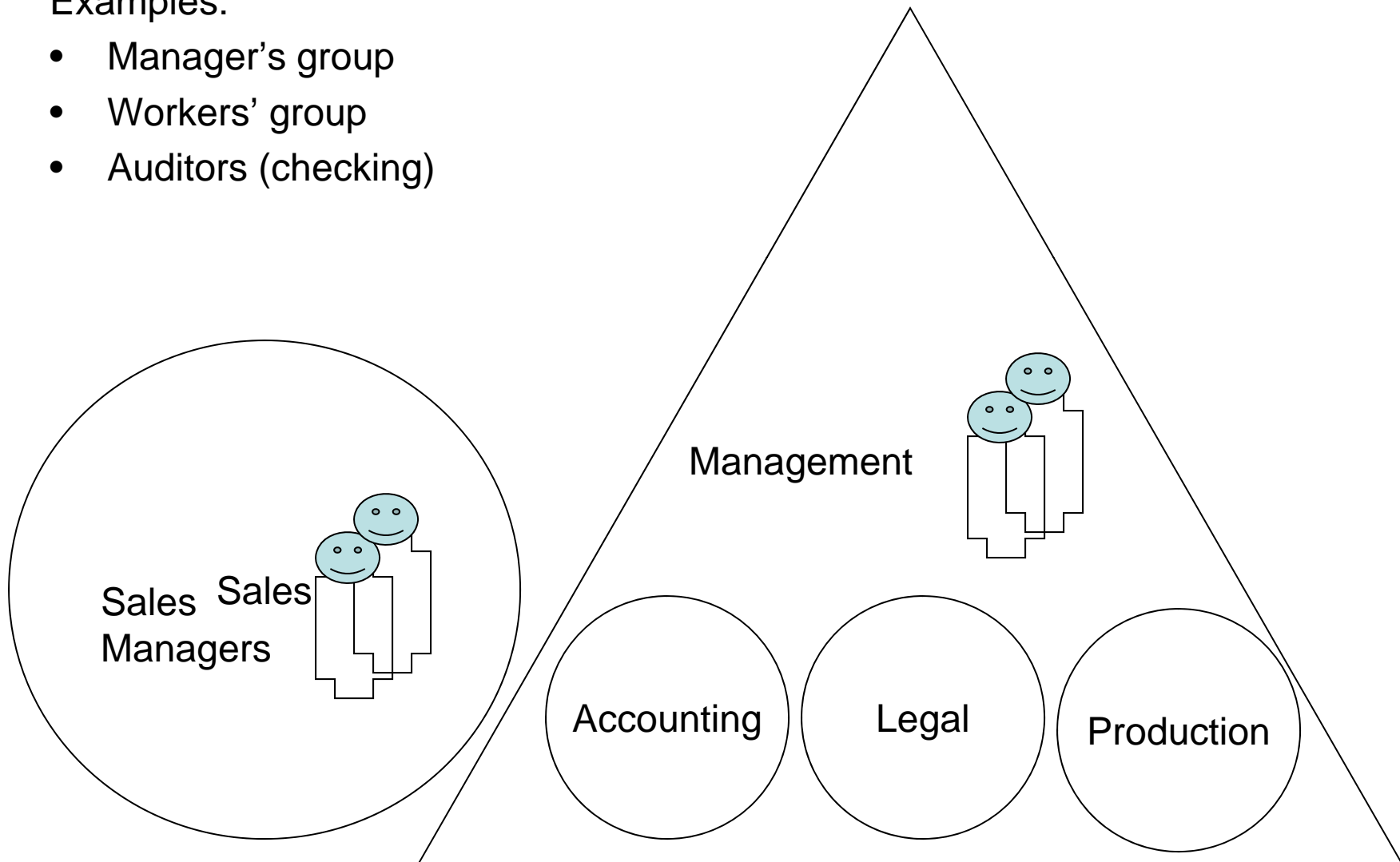


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Inside the Domain

Examples:

- Manager's group
- Workers' group
- Auditors (checking)



Design an Active Directory

Design a Active Directory that has three domains in the company tree and one external domain attached to the tree. Place Organizational Units inside the three domains in the main tree. In one Organization Unit, place in two groups.